

Unit 1 - Organic Chemistry

- Characteristics of organic compounds
- Identifying and drawing isomers
- General formulas of alkanes, alkenes, alkynes, and cyclic compounds
- Sigma vs. Pi bonding
- Draw and name hydrocarbons that have alkyl substituents
- Aromatic Compounds \rightarrow benzene (O.M.P.)
- Name and draw the following hydrocarbon derivatives:

\Rightarrow Organic Halides $R-X$

\Rightarrow Alcohols $R-OH$

\Rightarrow Ethers $R-O-R'$

\Rightarrow Aldehydes $R(H)-C(=O)-H$

\Rightarrow Ketones $R-C(=O)-R'$

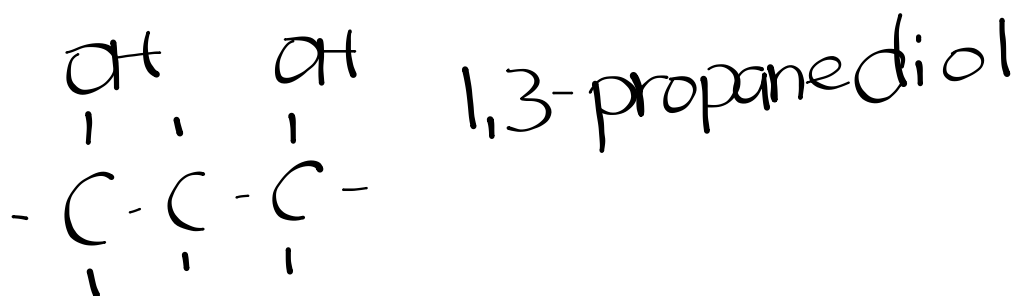
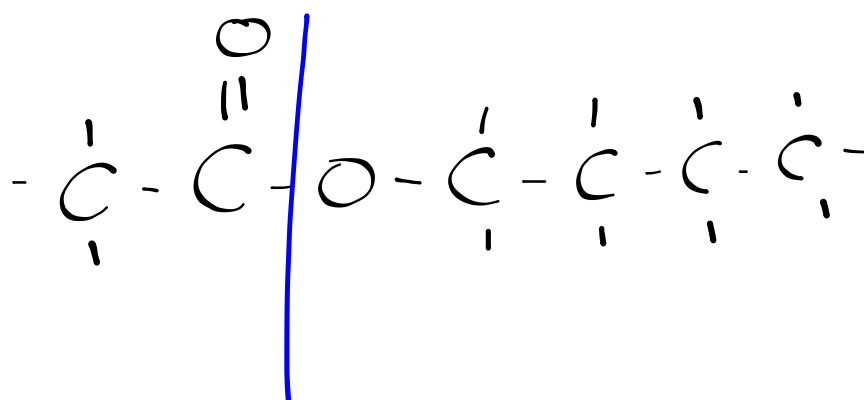
\Rightarrow Carboxylic Acids $R(H)-C(=O)-OH$

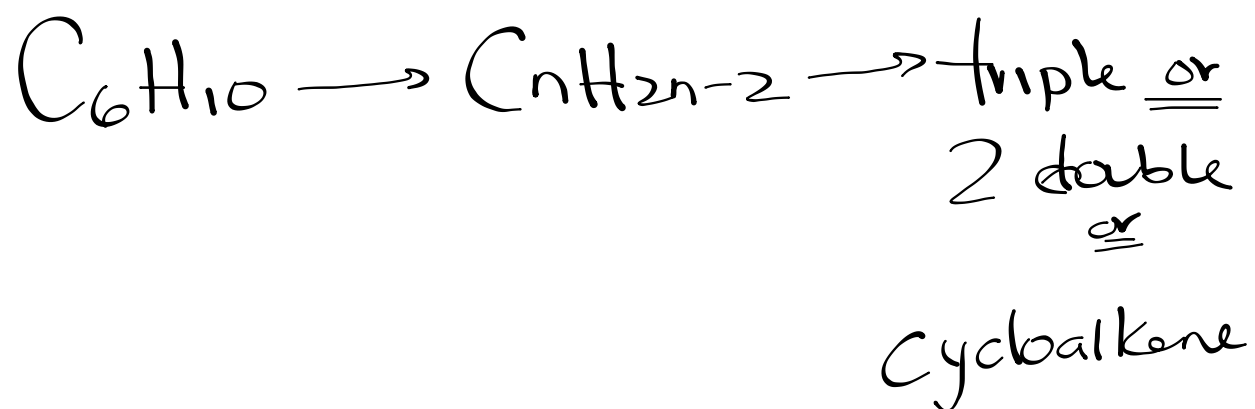
\Rightarrow Esters $R(H)-C(=O)-O-R'$

- Reactions



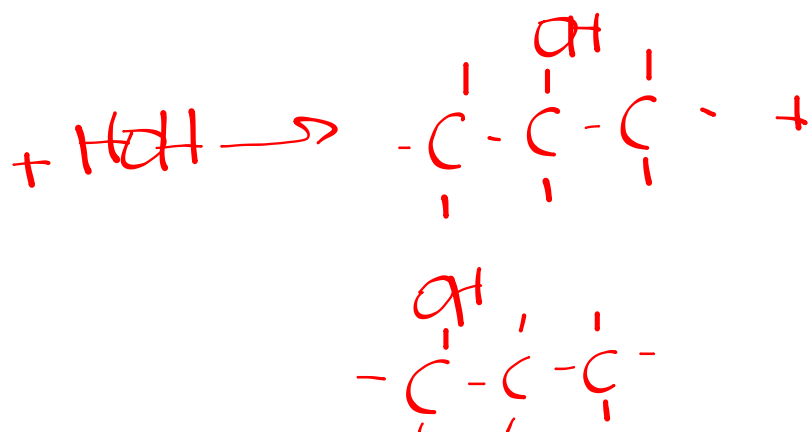
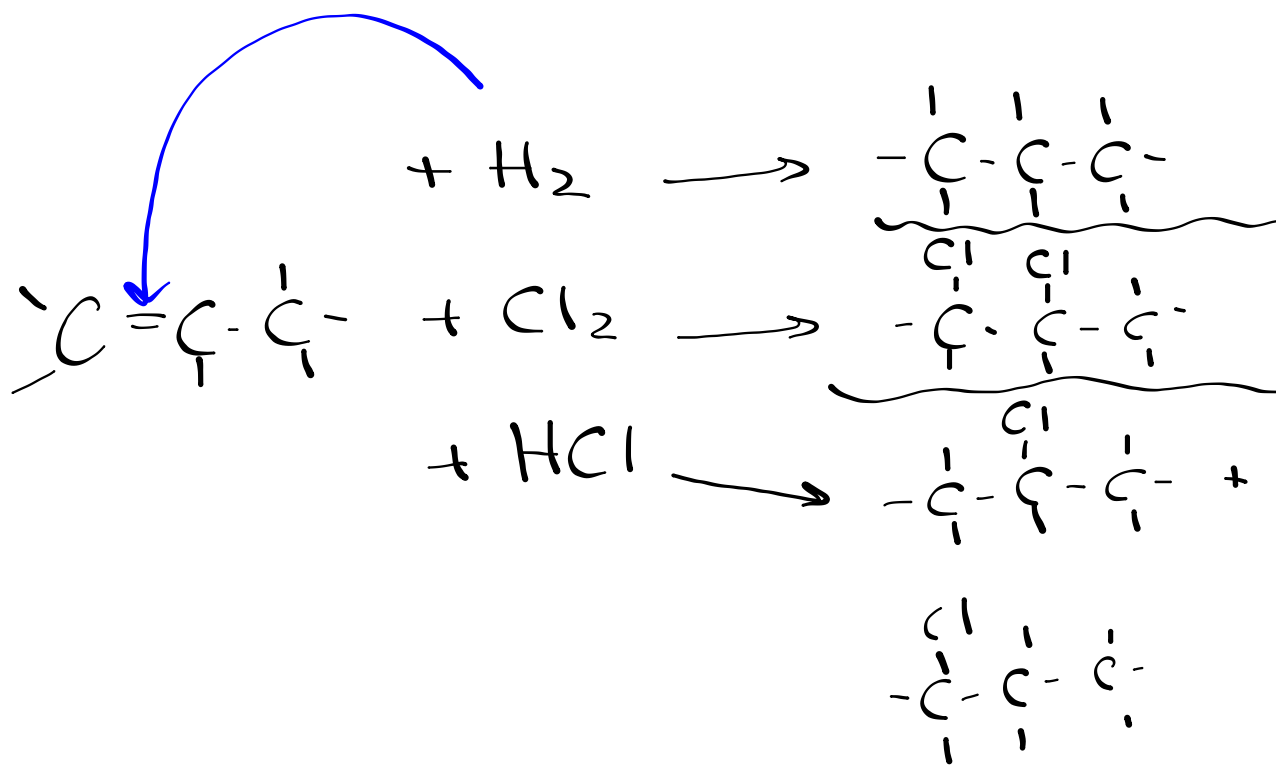
butyl ethanoate

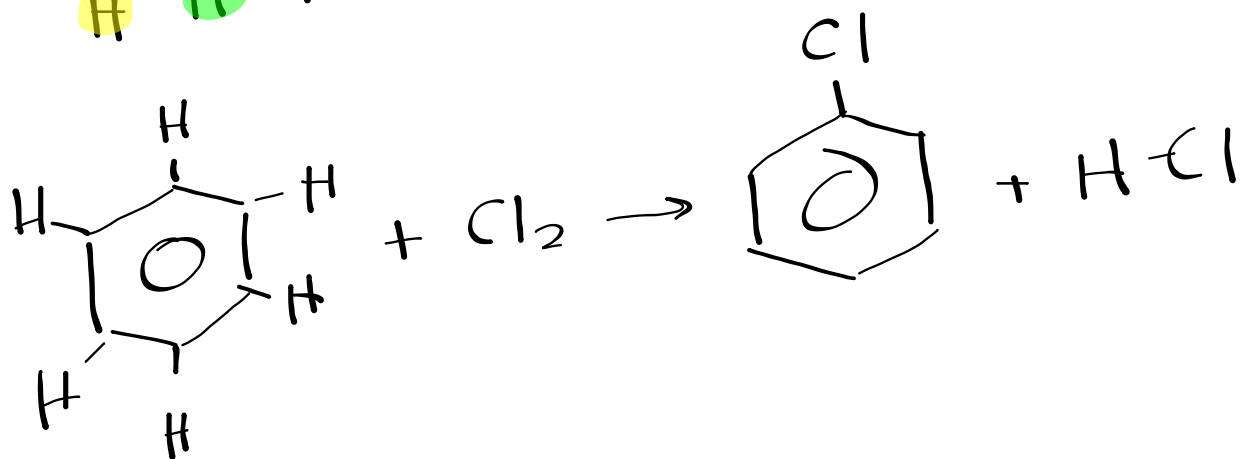
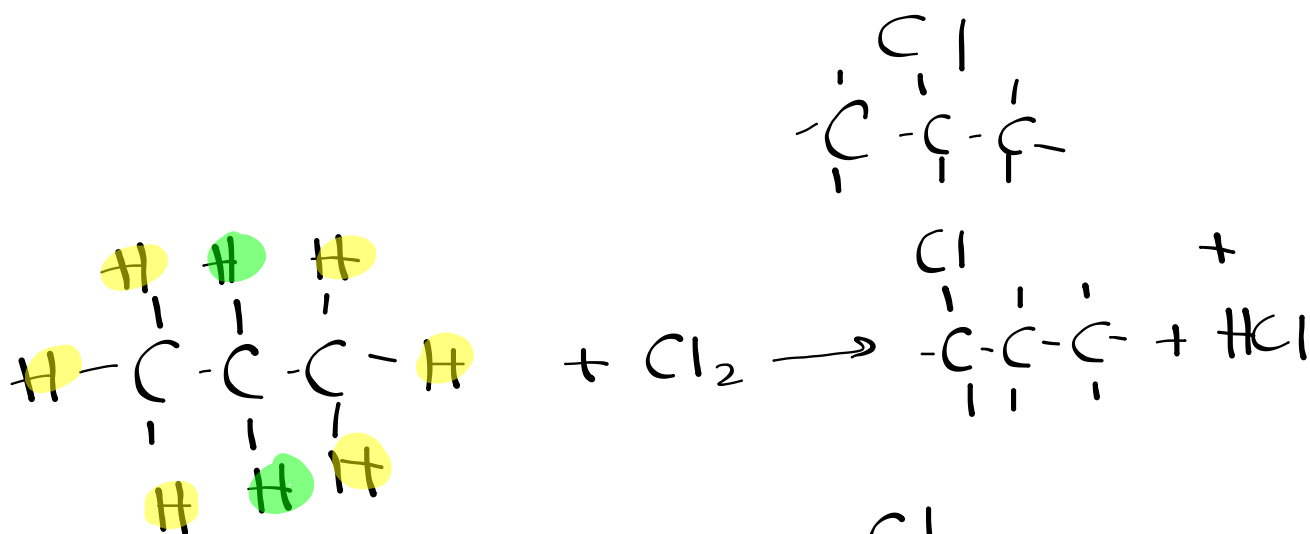


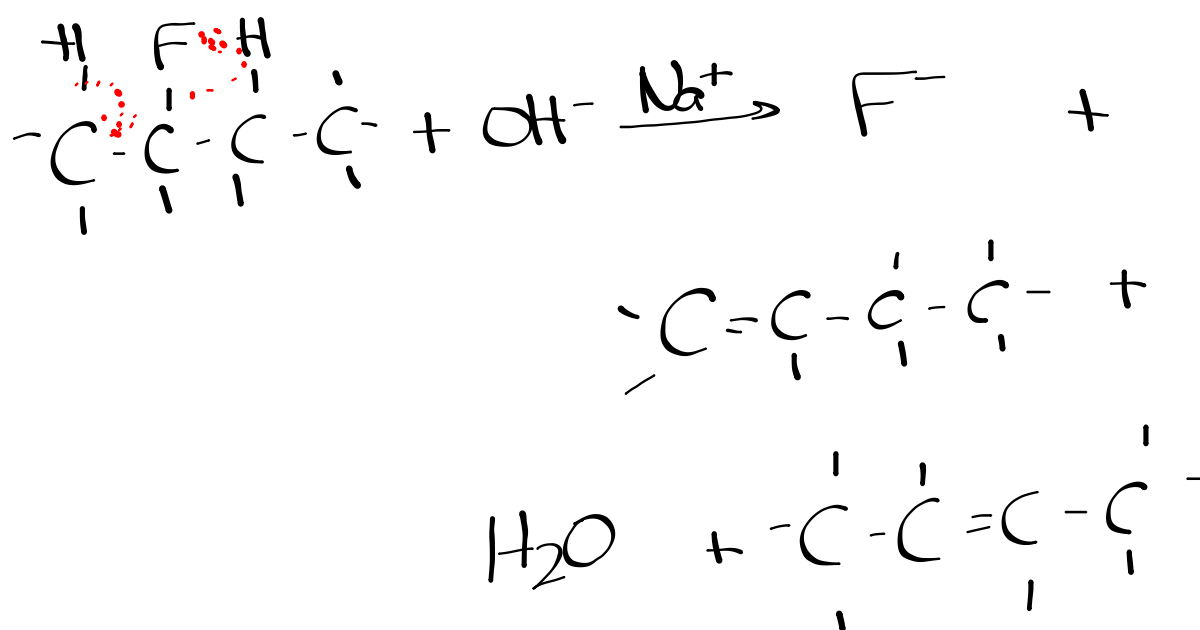


Reactions

- Cracking (*break into pieces*)
- Reforming (*two small \longrightarrow one big*)
- Combustion (*burned, common oxides*)
- Addition (*breaking a pi bond(s)*)
- Substitution (*break a C-H bond and
replace with halide*)
- Elimination (*adding a pi bond*)
- Esterification
(*carboxylic acid + alcohol \longrightarrow ester*)







p. 719-720 #37-46, 49, 50, 54-56, 59-61,
63, 64

p. 757-758 #26-35, 38, 40, 43-45